

Montana and the Sky



Vol. 36, No. 7

MONTANA AERONAUTICS DIVISION

July 1985

SLC FLIGHT WATCH EXPANDED

(The following article was prepared by the Salt Lake City Flight Service Station for inclusion in Montana and the Sky.)

En Route Flight Advisory Service (EFAS) has been in existence for over a decade; however, it makes sense to renew what can be expected from this service and how pilots can help to make it work more efficiently.

First, in a more formal sense, a review of the EFAS specialists' parameters by paraphrasing from our handbook will be helpful.

FAA Handbook 7110.10, paragraph 811, governs the general operating procedures of EFAS. The primary purpose of EFAS is to enhance aviation safety by providing en route aircraft with timely and meaningful weather advisories. Flight Watch (FW) serves as a common collector for receiving and disseminating inflight weather reports. It is not to be used for flight plan filing, position reporting, or to provide a complete preflight weather briefing. En route flight advisories shall be tailored to the phase of flight that begins after climb out and ends with descent to land. Immediate destination weather and terminal forecasts shall be provided upon request. Pilots requesting information not within the scope of Flight Watch shall be advised of the appropriate FSS to contact.

In recent months, Salt Lake City Flight Watch has expanded considerably. Flight Watch responsibilities for all of Utah, Montana, Nevada, most of Idaho and Wyoming, and portions of Oregon and

California have been consolidated into Salt Lake City. In other words, Flight Watch stations at Boise, Casper, Great Falls, and Las Vegas no longer exist.

Weather information can be obtained on frequency 122.0 on any of the 24 communication outlets monitored at the Salt Lake City Flight Service Station. Incidentally, these same services will be available at the Cedar City AFSS after consolidation to that site.

In order to receive all that the EFAS has to offer, pilots are encouraged to follow the suggestions listed below when using Flight Watch:

1. Please state your position on your initial call up with reference to a navigational aid or some prominent geographic point such as a city. Doing so will help the EFAS specialist determine the correct communications outlet on which to respond to your request.

2. If your request is not answered immediately, wait a few moments before calling EFAS again. Specialists are often busy on a different outlet and will answer you promptly.

3. Pilot reports are a major source of the weather information used by Flight Watch facilities. By giving EFAS frequent and accurate PIREPs, pilots help everyone using the system derive the maximum benefits available.

4. Unless unusual circumstances are involved, please open and close flight plans via appropriate FSS frequencies or by telephone. When conditions are such that

Flight Service cannot be reached over normal channels, please feel free to contact EFAS.

5. Because of the volume of traffic on the Flight Watch frequency, flight plans cannot be filed with EFAS. Pilots are encouraged to file with FSS prior to takeoff.

There is always room for improvement in any system. The FAA stands ready to receive pilot suggestions concerning EFAS and will act appropriately to improve this service. Flight Watch is tasked with providing real-time weather service to pilots in flight. Pilot consideration of the above items will greatly increase the effectiveness of EFAS. With pilot input, Flight Watch will continue to grow and improve as a service to the flying public.



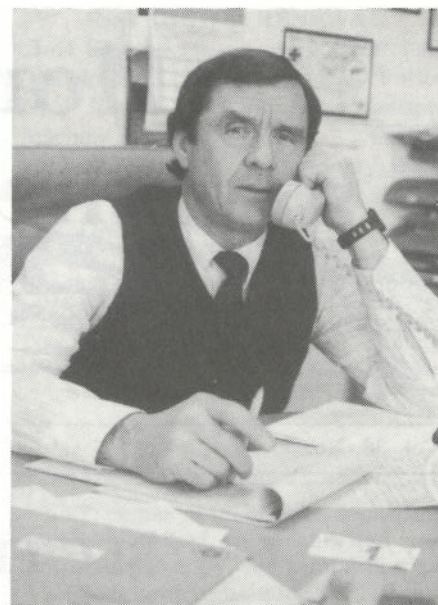
A superior pilot is one who stays out of trouble by using his superior judgement to avoid situations which might require the use of his superior skill.

Administrator's Column

Schafer Meadows. I regret that I will miss this year's Schafer Meadows work session fly-in. This will be the first time I've missed this fly-in in over ten years; however, a conflicting schedule will have to take precedence. I do, however, wish to urge your attendance for the work session as there is much to be accomplished this year such as setting new posts along the south fence, installing new windsocks, painting and lubing the windsock standards, campground cleanup, filling in gopher holes, picking rocks, etc. Inasmuch as Schafer Meadows airstrip lies within the wilderness, I would like to encourage all of you flying in to limit your flying activity in the Schafer Meadows vicinity to only one landing and takeoff in order to reduce the noise impact in the surrounding wilderness. Again, I regret not being with all of you this year, but I know you will have a great wilderness experience and at the same time accomplish some necessary maintenance on the airstrip in order to preserve it in the highest safety standard.

* * * *

INAC. The International Northwest Aviation Council is holding their annual conference in Helena this August 20 - 23. This is an excellent opportunity for those interested in aviation to attend the many educational panels on the program. INAC was formed in 1936 and has become a dedicated organization working to further aviation on every level. The area of membership is the northwestern United States and western Canada. If you are an airport board member or manager, an aviation council member, associated with any airline or aviation committee, a flying club member, FBO, pilot, aviation mechanic or technician, or depending on aviation for income directly or indirectly, you will find the upcoming INAC conference worth attending. Judge for yourself — attend; and I'm sure you will wish to become an INAC member.



U.S. Department
of Transportation

**Federal Aviation
Administration**

NOTICE

All Pilots

HELP US — HELP YOU

- All ELT Transmissions are Now Reported to Search and Rescue by Satellites.
- 97% of ELT Reports are False Alarms—Over 600 Per Month.
- Searching for False Alarms Detracts from the Search for a Downed Aircraft—That Aircraft may be Yours.
- Before Start-Up and After Shut-Down, Tune Your Aircraft Receiver to 121.5—Your ELT may be Transmitting.
- If Your ELT Was On—Call Your FSS as Soon as Possible.
- Check Your ELT Batteries—Dead Batteries Will Send a Distress Signal to No One.
- An Operable ELT may Save Your Life.
- Disconnect the ELT Battery Whenever You Remove an ELT from an Aircraft.

Montana and the Sky
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Ted Schwinden, Governor
Keith Colbo, Director

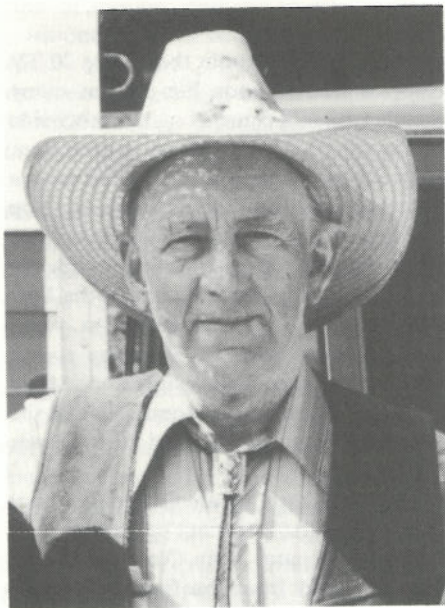
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Sondreson Dies In Arizona



Funeral services were held in Edinburg, North Dakota, on March 14 for Loyd Sondreson.

Loyd was a long-time resident of the North Fork of the Flathead at Polebridge. He died in Apache Junction, Arizona, where he and Ruth were spending the winter.

Loyd was a private pilot, beginning his flying in an Aeronca in 1958 out of Kalispell City Airport. He owned a Cessna 170 and a Cessna 180.

Loyd and Ruth Sondreson were married in 1939 in North Dakota, later moving to Philipsburg, Montana, where he was a hoisting engineer for several years.

The Sondresons owned and operated a logging and sawmill operation plus a cattle ranch in the North Fork. Loyd had his own airstrip near his home and was also active in the building of the airstrip at Moose City at the border.

An active member in flying organizations, Loyd belonged to the Montana Pilots Association, the Montana Flying Farmers and Ranchers, and the International Flying Farmers and Ranchers. In 1974 he was selected Montana Flying Farmer of the Year and served as a director of MFF from 1973 - 1975. Loyd was also an active member of the North Fork Improvement Association, helping to build the community hall there which has now been renamed Sondreson Memorial Hall in his honor.

Montana pilots were always welcomed at the Sondreson airstrip on hunting and fishing trips and had great fun at MFF fly-ins and other get togethers there.

Loyd will be greatly missed. His wife Ruth is spending the summer at their home in Polebridge.

MISSOULA PREPARES FOR AIR SHOW

A full day of activities should keep everyone going at the fourth annual Missoula Air Show scheduled for August 4.

The day will get under way with a general aviation fly-in breakfast at the Empire Airways hangar beginning at 7:30 a.m. and running until noon.

Open house at the airport begins at 10:00 a.m. with a wide variety of military aircraft, assorted World War II planes, and a model aircraft show. Helicopter and airplane rides will be offered all day at both FBOs. Weather permitting, there will also be tethered rides in hot air balloon. The smokejumper base will be open for tours with a free shuttle service to the base provided.

The Northern Knights will headline the air show, which is scheduled to begin at 2:00 p.m. Other performers include: the ACME Duck and Air Show, a comedy act; Mike Wiggins out of Bonners Ferry, Idaho; the "Avid flyer" Lee Dubay from Washington; and the University of Montana Silvertip Skydivers.

Admission charge will be a \$2 per car parking fee with no charge for those flying in. Food and souvenir concessions will be available.

Strouf Fly-In Cancelled

The hot weather has forced Dick and Leona Strouf to begin an early harvest, and for that reason they have been forced to cancel the fly-in scheduled at their ranch July 27.

CALENDAR

July 19 - 21 — Schafer Meadows Maintenance Work Session.

July 19 - 21 — Gathering of the Classics Air Show, Kalispell City Airport, Kalispell.

July 19 — Montana Aeronautics Board Meeting, Strand Aviation, Kalispell.

July 26 - Aug. 2 — EAA International Fly-In Convention, Oshkosh, Wisc.

July 27 — Hamilton to Jackpot Air Race.

Aug. 2 - 4 — MAAA Fly-In, Three Forks. Contact Bud Hall at 586-3933.

Aug. 3 - 4 — Northwest Mountain Region Safety Seminar hosted by Oregon Aeronautics, Bend, Ore.

Aug. 4 — Missoula Air Show and Fly-In Breakfast.

Aug. 16 - 17 — Fun & Fly-In at Eagle Flight Aviation, Belgrade.

Aug. 17 — Bozeman Air Show.

Aug. 20 - 23 — International Northwest Aviation Council Convention, Helena.

Sept. 7 — Fly-In Crystal Lakes Resort. Phone 882-4455 for reservations.

Sept. 8 — Glacier Park International Air Show, Kalispell. Features the Thunderbirds.

Sept. 27 - 29 — Mountain Search Pilot Clinic, Kalispell.

Oct. 4 - 6 — Montana Flying Farmers Convention, Glacier Hotel, Cut Bank.

Oct. 5 — Great Falls to Jackpot Air Race. Call Patti Thompson at 452-8800 or write her at 2824 4th Ave. S., Great Falls.

Oct. 9 - 12 — AOPA Convention and Industry Exhibit, Washington, D.C.

Feb. 14 - 16, 1986 — Flight Instructors Refresher Clinic, Helena.

March 12 - 15, 1986 — Montana State-wide Aviation Conference.

A Flight Instructor's Credo

*Lord, he will walk in my image and as I have taught him,
Therefore, let me not make the small, careless mistakes, but help me to show him that the right way is the safe way, so he will fly again tomorrow.
If I may, Lord, pray a lot, scold a bit, cuss a mite, so he can fly safely all his life.*

(Courtesy of Mr. George Holey)

Leaving The Cradle . . .



By: Patricia Johnson

Montana Candidate for Teacher in Space

"The earth is the cradle of the mind, but you cannot live in the cradle forever."

Konstantin Tsiolkovsky, 1896
(Russian Rocket Scientist)

The odds that any one teacher will ride the space shuttle are better than a lottery, but they are still 11,000 to one. From a field of more than 11,000 applicants, 114 teachers were invited to the NASA Teacher in Space National Awards Conference in Washington, D.C., on June 22 - 27, 1985, to compete for that one place. There were two nominees from each state, territory, and agency (such as Department of State schools). Montana's candidates are Patricia Johnson and Paul Dorrance.

This group of 114 teachers was reduced to 10 finalists by a national selection panel who reviewed the candidate's written application and a video tape that was made in each state. Each candidate was interviewed twice for 15 minutes each time. The 10 who were selected went to Houston in July to undergo extensive medical tests, to ride 40 parabolas in the KC-135, and to use the high altitude chamber. Following this, they returned to Washington, D.C., for intensive interviews with a NASA review board. Five will be selected; and from these, the NASA administrator, James Beggs, will

select one to fly and one to train as an alternate. This teacher will launch on January 22, 1986, and the remaining 113 state nominees are invited to this launch.

The selection committee was composed of nationally known persons, including Dr. Robert Jarvik, inventor of the artificial heart; four former astronauts - including Deke Slayton, one of the original Mercury Seven; actress Pam Dawber - Mindy from the TV show "Mork and Mindy"; and Wes Unseld, a former professional basketball player. Also on the panel were the presidents of American University, Duke University, and Vassar College. Each committee member was chosen to bring a certain expertise (teamwork, experience in space, knowledge of communication or of education) to the selection process.

NASA provides the vision, planning, and money for its projects, but the actual work is done by contractors. Rockwell International built the shuttle, Morton-Thiokol built the shuttle engines, and the Council of Chief State School Officers administered the NASA Teacher in Space Project. Terri Rosenblatt of the Council together with Alan Ludwag, spaceflight participant manager for NASA, organized the entire selection process. They also treated the state nominees royally by arranging several receptions in our honor, providing speakers of impeccable credentials, and by providing us the opportunity to speak to a great variety of experts in order to expand our horizons.

At a reception at the National Air and Space Museum, the Museum director, Walter Boyne, welcomed us to a private showing of "The Dream is Alive," filmed in space by the astronauts and shown on a four-story-high screen. Astronauts say that this film is the nearest thing to being in space; and since only about 100 people have been there, it will help acquaint many with the beauty of the earth from space, its fragility, and the invisibility of national boundaries.

President Reagan attended the premiere showing six days before we saw it; and, at the White House, he enthusiastically recommended that we see it. He seemed pleased when he was told that we had seen the film the evening before. When he spoke

to us in the East Room there were 20 TV cameras trained upon him and as many people with still cameras on the other side of the room. At the afternoon reception, we were served lemonade and iced tea - a welcome relief from the constant soda pop that had been available at breaks in our lectures. We were free to walk through the Red, Blue, and Green Rooms in the East Wing, and it was luxurious to roam through those beautiful Victorian rooms with their 20-foot-high ceilings and to look out at the Washington Monument and the Lincoln Memorial beyond the flower gardens.

At the Dirksen Senate Office Building, we met the first astronaut to be elected to Congress, Senator John Glenn (D-Ohio); and we heard from the first member of Congress to ride the space shuttle, Senator Jake Garn (R-Utah), who told us, "I can't tell you how excited I am to be here just knowing that one of you is going to get to fly!"

Judy Resnick and Joe Allen, NASA astronauts, talked of life and work in space. They described the shuttle as being 42 stories high when positioned for launch; and Joe warned that when walking across the expanded metal catwalk to enter it, those with a fear of heights should not look down. Launch feels like a noisy, fast, bumpy train ride. As soon as the solid rocket boosters ignite, there is no way to

Teacher in Space Project



abort for the first 2.5 minutes it takes for them to burn out. While orbiting, there is no need for the nose to point in the direction of motion; and the shuttle is often positioned with its belly forward. Orbital speed is about 17,000 mph. Leaving darkness and entering daylight takes about 15 to 20 seconds - a much shorter twilight than on earth. Re-entry speed is Mach 17.

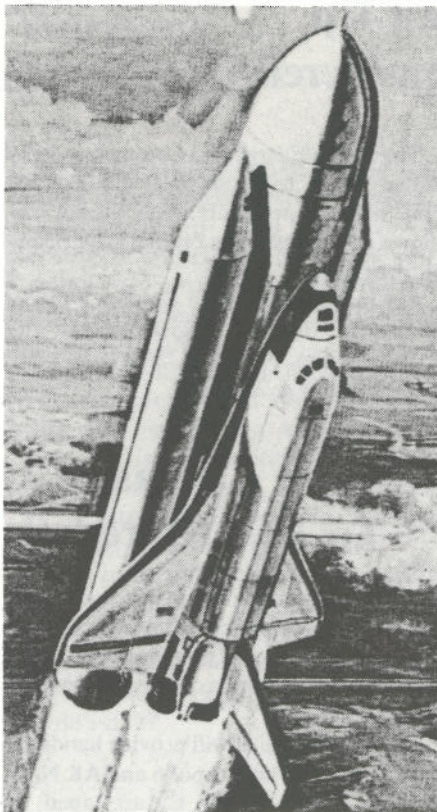
John Hartsfield of the NASA Lewis Research Center explained the cramped conditions on the mid-deck area that is 13 feet long, 9 feet wide forward, and 12 feet wide aft. Sometimes it is necessary for some crew members to be still and stay out of the way so that others can do their mission assignments. Each person has a 10" by 17" by 24" locker in which to store personal belongings, and often items are taken into space for friends. He pointed out "NASA-dent," an ingestible toothpaste.

Harry Herzer of NASA headquarters discussed the "extraterrestrails" - samples from the moon. Prior to a lunar landing by people in Apollo, the Rangers were crash-landed on the moon and sent back photographs. Later, the Lunar Orbiters returned more pictures, and the Surveyor solar powered robot probes dug up samples and returned them.

Apollo 12 landed within walking distance of Surveyor 3 to inspect an object that had been on the moon for three years. A camera made by Westinghouse was retrieved and life was found on an interior lens surface. One of the technicians who originally assembled it had had a cold, and the human cold organism had survived for three years in a near vacuum and a 500 degree temperature range.

An interesting overview of the international world of space was given by Marcia Smith of the Congressional Research Service of the Library of Congress. She has just been appointed by the President to be the executive director of the National Commission on Space and was seen often in the PBS documentary "Spaceflight." She pointed out that nearly all countries use space, some are simply non-launch countries. The major launching countries are U.S.A., U.S.S.R., China, Japan, India, and the European Space Agency (a consortium of nations).

There is a thriving competition among those with launch facilities to capture the launch market. The Ariane rocket of Europe competes heavily with the shuttle now. Marcia said that China has two



launch sites and that their program has been very successful so far and could capture the launch business of the developing countries. India has one launch site and has also launched with both the U.S. and the U.S.S.R. India has one cosmonaut and next year will have an astronaut. Japan has two launch sites in southwest Japan and cannot take business from our shuttle with their current rockets. They are developing new rockets and have expressed interest in manned space flight. Japan has contributed one billion dollars to development of the space station.

Russia has three launch sites in eastern Russia. The Russians show a very conservative attitude toward manned space flight and try unmanned tests extensively first. They were very successful at Venus and returned the first pieces of another planet. The only remaining agreement between the U.S. and the U.S.S.R. concerns the Kospas, a search and rescue satellite that has been used to locate downed aircraft in Montana.

Marcia Smith said that the only thing new about military use of space is the debate about it. She said that the military has been using space for communications, navigation, weather, mapping, recon-

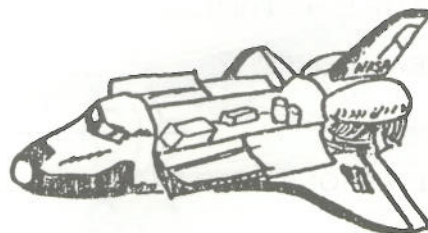
naissance, and weapons testing. The Soviets have tested a co-orbital anti-satellite device that explodes near a target and releases pellets which damage the targeted satellite. Out of 20 tests of these, 9 have been successful.

The U.S.S.R. has done the first refueling in space, and this allows them to refuel their space station and keep it operational for up to five years. However, the future of Soviet manned space flight is limited by their ground-based tracking system. Although the Soviets are ahead in the number of launches and experience in space, the United States is ahead technologically.

The first astronauts were highly skilled military pilots because no one knew what challenges were held by spaceflight and only those in perfect condition and with highly trained reflexes were sent. The second group of astronauts have been scientists whose job it was to study the environment of space. The next most common person in space will be construction workers and technicians who will build the space station and may be called by a name other than "astronaut." According to NASA's James McMurtrey, about 60% of these workers will be women because we are "cheaper to operate and better built than men." Women have been found to be less susceptible to space sickness, lose less calcium from their bones on long missions, and experience less enlargement of the heart. Because women are usually physically smaller and can use less food, more useful payloads can be flown.

Some industries that may be better in space include those that damage the environment on earth, involve high energy particles, or require the making of totally perfect crystals. Mining of the moon or of asteroids is also likely.

The statement made in 1968 by Arthur Clarke is certainly applicable today: "The earth is indeed our cradle, which we are about to leave, and the solar system will be our kindergarten."



Tank Clean-Up Programs Considered

Several members of the House of Representatives feel the leaking underground storage tank law passed last year does not go far enough to protect the environment from leaking abandoned tanks or tanks owned by financially insolvent companies.

There are several ways in which such an "orphan" tank clean-up program could be accomplished: by including petroleum products in Superfund, the current toxic waste clean-up program; or by establishing a separate petroleum clean-up program funded by either a tank registration fee or a tax on petroleum products.

Inclusion in Superfund would expose tank owners and operators to significantly increased liability. A separate tank would require increased taxes.

Members of the House Energy and Commerce Committee are currently developing the specific provisions for an orphan tank clean-up program.

The National Air Transportation Association has taken a position in support of the clean-up of leaks from underground tanks and feels last year's legislation is adequate to achieve that goal. Current data on the scope and magnitude of the orphan tank problem does not justify additional governmental action of the nature being discussed at this time, according to the NATA "Legislative Report."

The House Energy and Commerce Committee intends to decide on a course of action in the near future. The Senate has shown no interest in an orphan tank clean-up program.

For more information contact William H. Power, director, Legislative and Industry Affairs, NATA, 4226 King Street, Alexandria, VA 22302.

Loran C Classes To Be Offered

Three clinic sessions on the use of the Loran C will be presented by Aerotronics at the Board room of the Montana Aeronautics Division office on August 1 and 2, 1985.

The clinics, which will provide hands-on experience with both Apollo and AR NAV models of the Loran C, are open to everyone at no charge. There will be one class session on Thursday evening, August 1, and two sessions on Friday — one in the morning and another in the afternoon. The sessions take about two hours.

Exact times for the sessions have yet to be determined. Anyone interested should call the Aeronautics office at 444-2506 or Aerotronics in Great Falls at 452-0081 for further information and exact class times.

BOZEMAN SCHEDULES AIR SHOW

The Bozeman Air Show, scheduled for August 17, will feature the aerobatics of the Northern Knights.

The air show, sponsored by the Military Affairs Committee of the Bozeman Chamber of Commerce, is scheduled to begin at 10:00 a.m. at Gallatin Field with static displays of military and civilian aircraft. Concessions will be available.

For further information, call the Bozeman Chamber of Commerce at 586-5421.

Shea Accepts Post In North Dakota

William F. "Bill" Shea, associate administrator for airports for the FAA, has announced that he will leave the FAA August 1 to become professor and chairman of the Aviation Department at the Center for Aerospace Sciences at the University of North Dakota.

FAA Administrator Donald O. Engen said, "Bill Shea's enthusiasm, loyalty, and genuine love of aviation will be sorely missed."

Montanans who attended the 1985 Statewide Aviation Conference will remember Shea as being the featured speaker at the luncheon on Friday, March 8.

Shea moved to the FAA from a position as director of aviation for the Port of Portland in Oregon. Prior to that he was commissioner of transportation (Aviation and Transit) for Broome County, New York. He also served as an adjunct instructor for the State University of New York in Binghamton. Previously he was chief of the California Division of Aeronautics based in Sacramento.

Shea received a B.A. degree from the University of New Hampshire, a Master's in Education from Salem State College, and did other graduate work at the University of Alabama.

Holding commercial, instrument, multi-engine, flight instructor, and glider ratings, he has more than 6,500 hours of flight time.

MOVING???

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Proximity Warning Indicator Demonstrated

The prototype of a promising new proximity warning indicator has been demonstrated at the EAA Aviation Center. EAA member Russ Runnels developed the equipment.

Runnels describes the equipment as a passive, cooperative pilot warning system that reacts to the infrared emissions of the strobe lights of other aircraft. The warning system has a range of approximately 1 1/4 miles. Since the system itself does not generate a signal, it does not interfere with any radio or navigational instruments.

Runnels, of Martinsville, Ohio, said, "If another aircraft (equipped with an operating strobe light) enters your air space, you receive both an audible and visual warning. The flashing light on the display indicates the direction from which the other aircraft is approaching." Runnels has designed two different cockpit displays. At the pilot's option, the display may either be mounted in or on top of the instrument panel.

The entire system consists of the panel display, two wing-tip sensors (approximately 5 inches by 1 1/2 inches), an electronic package about the size of a large cigar box, and shielded cables. The total weight of the entire system is approximately 7 1/2 pounds.

Runnels told EAA staff members that he has conducted well over 30 hours of flight testing, including testing within high density air traffic areas. The prototype has been mounted aboard a Cherokee 140. The system has also been tested aboard a Piper Commanche. Runnels says the system has always alerted him to other traffic in the vicinity, even when he was unable to see the other airplane because it was behind him. He says that false alarms are extremely rare and that the system functions satisfactorily under both day and nighttime conditions. The warning device does not react to the strobe light on the aircraft it is mounted in. "This is an excellent aid

to the pilot which enhances the 'see and be seen' concept," Runnels said.

According to Paul Poberezny, president of EAA, Runnels will display his proximity warning indicator at the EAA Fly-In Convention July 26 - August 2.

Experimentation on the device has been completed and demonstration units are now being assembled. A price for the production model has not been determined, but it will be "very affordable" to the average sport and general aviation pilot.

More information on the proximity warning indicator may be obtained from Jim Yoder at Mechniarts International, 10300 West 103 Street, Suite 201, Overland Park, KS 66212, phone 913-888-2877.



Notice To Pilots

Runway 3/21 at Gallatin Field has been lengthened and paved and will open for public use in the near future. Here is some information that may be of help to you as you prepare to use this runway.

Runway 3/21 is 3,400 feet long and 60 feet wide. The runway slopes up to the south at a rate of .68% — or the south end is about 23 feet higher than the north end. The runway has been constructed to hold aircraft weighing up to 16,000 pounds. The traffic pattern for both runway 3 and 21 will be standard left hand.

If you are on the ground at the approach end of runway 3, you cannot see the approach end of runway 12 because of the buildings in between. For this reason, the following NOTAM will be issued when the runway is opened:

Caution: Blind area. Takeoffs on runway 3 prohibited unless you confirm that there is no traffic using runway 12.

Kologi Selected For Science Workshop

Fred Hasskamp, chief of the Safety and Education Bureau and director of the Aerospace Teacher Workshop Program for the Montana Aeronautics Division, has announced the selection of Havre High School chemistry teacher, Ron Kologi, as a participant in the Newmest program. The program is jointly sponsored by NASA and the National Science Foundation.

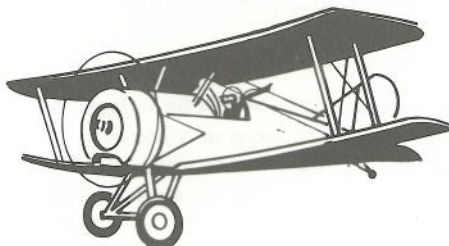
The program is designed to accommodate 30 secondary science and math teachers from throughout the 11 western states.

Kologi, his wife, and daughters reside in Havre where he is teaching chemistry. For the past 23 years he has been a director of the Aerospace Education Teachers Workshop through Northern Montana College sponsored by the Montana Aeronautics Division.

The Division congratulates Ron on his selection.



Ron Kologi (left) visits with Bill Horvath from NASA at the Havre Airport following an Aerospace Teacher Workshop session.



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